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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/698,374 | 11/03/2003 | Kia Silverbrook | YU190US | 1139 |
| 24011 | 7590 | 02/09/2006 | EXAMINER | |
| SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, NSW 2041 AUSTRALIA | | | STEPHENS, JUANITA DIONNE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2853 | |

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,374

Applicant(s)

SILVERBROOK, KIA

Examiner

Juanita D. Stephens

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-16 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim 7 cancelled.

Allowable Subject Matter

1. The indicated allowability of claims 1-6, and 8-16 is withdrawn in view of the newly discovered reference(s) to WO 99/03681. Rejections based on the newly cited reference(s) follow.

Priority

2. The benefit claim filed on 7/10/1998 and Australia PP2592 3/25/2998 and Australia PO 7991 7/15/1997 was not entered because the required reference was not timely filed within the time period set forth in 37 CFR 1.78(a)(2) or (a)(5). If the application is an application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a nonprovisional application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the reference to the prior application must be made during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). If applicant desires the benefit under 35 U.S.C. 120 and 119e based upon a previously filed application, applicant must file a petition for an unintentionally delayed benefit claim under 37 CFR

1.78(a)(3) or (a)(6). The petition must be accompanied by: (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted); (2) a surcharge under 37 CFR 1.17(t); and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-6, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/03681.

A nozzle arrangement (Fig. 20) for an inkjet printhead, the nozzle arrangement including: 1) a nozzle chamber (811) for holding ink, 2) an actuator (816/817) in fluid communication with the nozzle chamber, the actuator being movable with respect to the nozzle chamber upon actuation by passing an electric current through a portion of the actuator to cause differential thermal expansion in the actuator (page 49, lines 11-14), 3) a fluid ejection port (812) in fluid communication with the nozzle chamber for allowing ejection of ink upon movement of an operative portion of the actuator relative to

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the nozzle chamber during actuation, the fluid ejection port defining an ejection axis generally perpendicular to a plane within which the fluid ejection port is disposed, 4) an inlet channel (disposed between actuators 816/817) in fluid communication with the nozzle chamber for supplying ink thereto from an ink supply (ink reservoir 815), 5) wherein the inlet channel is positioned for supplying ink to refill the nozzle chamber at a position radially displaced from the ejection axis (as seen in Fig. 20), 6) wherein the inlet channel is orientated such that the ink enters the nozzle chamber along an inlet axis that is substantially parallel to, but displaced from the ejection axis (as seen in Fig. 21), 7) wherein the fluid ejection port (812) is formed in a roof portion that at least partially defines the nozzle chamber, the nozzle arrangement being configured such that, upon actuation, an operative portion of the actuator is moved relative to the fluid ejection port, thereby causing the ink to be ejected from the fluid ejection port (812)(as seen in Figs. 20-22), 8) upon return of the actuator to a quiescent position after actuation the ejection of the ink through the fluid ejection port, the nozzle chamber refilled with ink via the inlet channel, 9) wherein the nozzle chamber is refilled with ink from the inlet channel due to a reduction in pressure within the nozzle chamber caused by surface tension of a concave ink meniscus across the fluid ejection port after ink ejection, 10) wherein the actuator is moveable within a plane upon actuation, the plane intersecting and being parallel with the ejection axis (as seen in Figs. 20-22), 11) wherein the actuator is mounted to flex about an anchor point upon actuation (as seen in Fig. 21), and 12) wherein the inlet channel is located in a plane that is parallel to both

the inlet channel axis and the ejection axis and which intersects both axes (as seen in Figs. 20-22).

Allowable Subject Matter

5. Claims 12-16 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach, suggest, or render obvious the limitation of a raised rib formation disposed on a floor or wall of the nozzle chamber adjacent the inlet channel. This invention solves the problem of impeding backflow of ink during the actuation.

7. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach, suggest, or render obvious the limitation of wherein the nozzle arrangement is configured such that, upon actuation, the roof portion, and thereby the fluid ejection port, are moved relative to the nozzle chamber, thereby causing the ink to be ejected from the fluid ejection port, recited in claim 4.

The prior art does not teach, suggest, or render obvious the limitation of wherein the actuator comprises at least one passive anchor and at least one active anchor,

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wherein the active anchor is resistively heatable by means of the electric current to cause thermal expansion relative to the passive anchor.

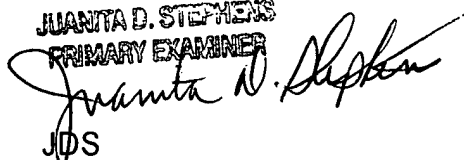
Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JUANITA D. STEPHENS
PRIMARY EXAMINER



JDS

February 6, 2006

Juanita D. Stephens
Primary Examiner
Art Unit 2853